

WHAT IS CLAIMED IS:

1. An image processing apparatus for processing a moving picture, comprising:

frame extraction means for extracting frames
5 constituting an entered moving picture;

discrimination means for discriminating a scene change by comparing frames extracted by said frame extraction means;

storage means for storing scene-change information
10 relating to the scene change discriminated by said discrimination means;

designating means for designating an image that corresponds to a scene that is the object of a search;

comparison means for comparing a scene-change
15 frame, which is obtained by referring to the scene-change information that has been stored in said storage means, and the image that has been designated by said designation means; and

scene extraction means for extracting a scene that
20 corresponds to the image based upon result of the comparison performed by said comparison means.

2. The apparatus according to claim 1, wherein said comparison means includes computation means for computing degree of similarity between the scene-change
25 frame and the image that has been designated by said designation means;

wherein said scene extraction means extracts the scene corresponding to said image based upon results of calculation performed by said calculation means.

3. The apparatus according to claim 1, further
5 comprising output means for outputting scene information relating to scenes that have been extracted by said scene extraction means.

4. The apparatus according to claim 3, wherein said
10 output means edits scenes that have been extracted by said scene extraction means and combines these extracted scenes into a single moving picture.

5. The apparatus according to claim 1, wherein said
15 designating means designates a pattern image that corresponds to any of a leading, intermediate or final frame of a scene that is the object of a search.

6. The apparatus according to claim 1, wherein said designating means is capable of designating a number of scenes to be extracted.

7. The apparatus according to claim 1, wherein said
20 designating means is capable of designating the time of a scene to be extracted.

8. The apparatus according to claim 1, wherein said designating means is capable of designating a number of scenes to be extracted, with regard to frames prior to
25 and with regard to frames on and after a frame corresponding to the pattern image.

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9. The apparatus according to claim 1, wherein said designating means is capable of designating time of a scene to be extracted, with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

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10. An image processing method for processing a moving picture, comprising:

a frame extraction step of extracting frames constituting an entered moving picture;

10 a discrimination step of discriminating a scene change by comparing frames extracted at said frame extraction step;

15 a storage step of storing scene-change information relating to the scene change discriminated at said discrimination step;

a designating step of designating an image that corresponds to a scene that is the object of a search;

20 a comparison step of comparing a scene-change frame, which is obtained by referring to the scene-change information that has been stored at said storage step, and the image that has been designated at said designation step; and

25 a scene extraction step of extracting a scene that corresponds to the image based upon result of the comparison performed at said comparison step.

11. The method according to claim 10, wherein said

comparison step includes a computation step of computing degree of similarity between the scene-change frame and the image that has been designated at said designation step;

5 wherein said scene extraction step extracts the scene corresponding to said image based upon results of calculation performed at said calculation step.

12. The method according to claim 10, further comprising an output step of outputting scene
10 information relating to scenes that have been extracted at said scene extraction step.

13. The method according to claim 12, wherein said output means edits scenes that have been extracted at said scene extraction step and combines these extracted
15 scenes into a single moving picture.

Sub A3 14. The method according to claim 10, wherein said designating step designates a pattern image that corresponds to any of a leading, intermediate or final frame of a scene that is the object of a search.

20 15. The method according to claim 10, wherein said designating step is capable of designating a number of scenes to be extracted.

16. The method according to claim 10, wherein said designating step is capable of designating the time of a
25 scene to be extracted.

17. The method according to claim 10, wherein said

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designating step is capable of designating a number of scenes to be extracted, with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

5 18. The method according to claim 10, wherein said designating step is capable of designating time of a scene to be extracted, with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

10 19. A computer-readable memory storing program code of image processing for processing a moving picture, the memory including:

15 program code of a frame extraction step of extracting frames constituting an entered moving picture;

program code of a discrimination step of discriminating a scene change by comparing frames extracted at said frame extraction step;

20 program code of a storage step of storing scene-change information relating to the scene change discriminated at said discrimination step;

program code of a designating step of designating an image that corresponds to a scene that is the object of a search;

25 program code of a comparison step of comparing a scene-change frame, which is obtained by referring to

the scene-change information that has been stored at
said storage step, and the image that has been
designated at said designation step; and

program code of a scene extraction step of
5 extracting a scene that corresponds to the image based
upon result of the comparison performed at said
comparison step.

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